



### SCIENTIFIC COUNCIL MEETING – JUNE 2006

#### CANADIAN REQUEST FOR SCIENTIFIC ADVICE ON MANAGEMENT IN 2007 OF CERTAIN STOCKS IN SUBAREAS 0 TO 4

1. Canada requests that the Scientific Council, at its meeting in advance of the 2006 Annual Meeting of NAFO, subject to the concurrence of Denmark (on behalf of Greenland), provide advice on the scientific basis for management in 2007 of the following stocks:

Shrimp (Subareas 0 and 1)

Greenland halibut (Subareas 0 and 1)

The Scientific Council has noted previously that there is no biological basis for conducting separate assessments for Greenland halibut throughout Subareas 0-3, but has advised that separate TACs be maintained for different areas of the distribution of Greenland halibut. The Council is asked therefore, subject to the concurrence of Denmark (on behalf of Greenland) as regards Subarea 1, to provide an overall assessment of status and trends in the total stock throughout its range and comment on its management in Subareas 0+1 for 2007, and to specifically:

- a) advise on appropriate TAC levels for 2007, separately, for Greenland halibut in the offshore area of Divisions OA+I AB and Divisions OB+I C-F. The Scientific Council is also asked to advise on any other management measures it deems appropriate to ensure the sustainability of these resources.
  - b) With respect to shrimp, it is recognized that the Council may, at its discretion, delay providing advice until later in the year, taking into account data availability, predictive capability, and the logistics of additional meetings.
2. Canada requests the Scientific Council to consider the following options in assessing and projecting future stock levels for Shrimp and Greenland halibut in Subareas 0 and 1:
    - a) For those stocks subject to analytical-type assessments, the status of the stock should be reviewed and management options evaluated in terms of their implications for fishable stock size in both the short and long term. The implications of no fishing as well as fishing at  $F_{0.1}$  and  $F_{2005}$  in 2007 and subsequent years should be evaluated in relation to precautionary reference points of both fishing mortality and spawning stock biomass. The present stock size and spawning stock size should be described in relation to those observed historically and those to be expected in the longer term under this range of fishing mortalities, and any other options Scientific Council feels worthy of consideration under the precautionary approach framework.

Opinions of the Scientific Council should be expressed in regard to stock size, spawning stock sizes, recruitment prospects, catch rates and catches implied by these management strategies for the short and long term. Values of  $F$  corresponding to the reference points should be given. Uncertainties in the assessment should be evaluated and presented in the form of risk analyses related to  $B_{lim}$  ( $B_{buf}$ ), and  $F_{lim}$  ( $F_{buf}$ ), as per the NAFO Precautionary Approach Framework.

- b) For those stocks subject to general production-type assessments, the time series of data should be updated, the status of the stock should be reviewed and management options evaluated in the way described above to the extent possible. Management options should be within the NAFO Precautionary Approach Framework.

c) For those resources for which only general biological advice and/or catch data are available, few standard criteria exist on which to base advice. The stock status should be evaluated in the context of management requirements for long-term sustainability and management options evaluated in the way described above to the extent possible. Management options should be within the NAFO Precautionary Approach Framework.

d) Presentation of the results should include the following:

I. For stocks for which analytical-type assessments are possible:

- A graph of historical yield and fishing mortality for the longest time period possible;
- A graph of spawning stock biomass and recruitment levels for the longest time period possible. The biomass graph should indicate the stock trajectory compared to  $B_{lim}$
- Graphs and tables of catch options for the year 2007 and subsequent years over a range of fishing mortality rates ( $F$ ) at least from  $F=0$  to  $F_{0.1}$  including risk analyses;
- Graphs and tables showing spawning stock biomass corresponding to each catch option including risk analyses;
- Graphs showing the yield-per-recruit and spawning stock per recruit values for a range of fishing mortalities.

II. For stocks for which advice is based on general production models, the relevant graph of production on fishing mortality rate or fishing effort.

In all cases, the reference points,  $F=0$ , actual  $F$ , and  $F_{0.1}$  should be shown. As well, Scientific Council should provide the limit and precautionary reference points as described in the NAFO Precautionary Approach Framework, indicating areas of uncertainty (when reference points cannot be determined directly, proxies should be provided).

3. Regarding Greenland halibut in Subarea 2 + Divisions 3KLMNO, Canada requests the Scientific Council:

- 1) to advise on appropriate TAC levels for 2007, based on biomass distribution, for Greenland halibut in these areas separately: SA 2+Division 3K and Divisions 3LMNO.
- 2) to provide information on the status of Greenland halibut in SA 2+ Divs. 3KLMNO in relation to the Greenland Halibut Rebuilding Plan and Strategy, including commentary on progress in relation to the targets described in the Strategy. In particular Scientific Council is requested to advise:

I. whether the 5+ biomass projected for Jan 1 2008 in its 2006 assessment is larger or smaller than this value from Scientific Council's 2005 assessment.

II. whether the 5+ biomass projected for Jan 1 2008 in its 2006 assessment is larger or smaller than the 5+ biomass estimated for Jan 1 2003 in its 2006 assessment.

III. the probabilities that the 5+ biomass target of 140,000 tonnes will be achieved by the years 2010, 2015, and 2020. SC should assume that the Rebuilding Plan TAC's will be followed in 2006 and 2007, and that various fishing mortality strategies, at least but not restricted to the following, are to be examined for 2008-2019:  $F_{0.1}$ ,  $F_{max}$ , and  $F_{2005}$ .

Yours sincerely,  
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